



Agriculture
Canada

Research
Branch

Direction générale
de la recherche

History of the

Saskatoon Research Station



Saskatoon
Saskatchewan
1917-1985



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SASKATOON RESEARCH STATION

From laboratory to station

The Saskatoon Research Station is part of a network of 47 research establishments across Canada operated by the Research Branch of Agriculture Canada. The station consists of an office-laboratory building with greenhouse and growth-chamber facilities on the campus of the University of Saskatchewan, and 100 ha of experimental plot land 5 km northeast of the Saskatoon Research Station. Its substation, the Scott Experimental Farm, is 160 km northwest of Saskatoon.

The origins of the Saskatoon Research Station are in four dominion laboratories that initially operated as separate units: the Dominion Entomological Laboratory, the Dominion Laboratory of Plant Pathology, the Dominion Forage Crops Laboratory, and the Dominion Forest Pathology Laboratory.

The Dominion Entomological Laboratory was established in Saskatoon during 1917, following the death of 300 cattle from black fly attacks along the South Saskatchewan River. Shortly after, the laboratory was also involved with severe outbreaks of grasshoppers. The disastrous wheat stem rust epidemic in 1916, which destroyed an estimated 100 million bushels (3 million tonnes) of wheat, prompted

Dusting with arsenic to control bertha armyworms, 1928 (Dominion Entomological Laboratory).

Poudrage avec de l'arsenic pour lutter contre la légionnaire bertha, 1928 (Laboratoire fédéral d'entomologie).



the formation of the Dominion Laboratory of Plant Pathology in 1919. The Dominion Department of Agriculture started the Dominion Forage Crops Laboratory in 1931 to support forage crop breeding, when financial support for this work at the University of Saskatchewan was limited. The Dominion Forest Pathology Laboratory was established in Saskatoon during 1948.

The present laboratory building was constructed in 1957 and, at that time, the four dominion laboratories began operation as four sections, entomology, botany and plant pathology, forage crops, and forest biology, under the direction of Dr. M.W. Cormack. With the amalgamation of the Science Service and the Experimental Farm Service, in 1959, the laboratory became known as the Saskatoon Research Station. In 1965, the Forest Biology Section was disbanded, with most of the staff members being transferred to Winnipeg.

Today, research in the areas of cereals, oilseeds, forage crops, and integrated pest management is conducted by 37 professionals and 57 support staff at the Saskatoon Research Station, and by 2 professionals and 13 support staff at the Scott Experimental Farm. The Research Services Section provides library, computer, statistics, photography,

Dominion Laboratory of Plant Pathology, 1930.

Laboratoire fédéral de phytopathologie, 1930.



and technology transfer services for the four research programs.

Oilseeds program

The objectives of the oilseeds program are to develop high-yielding cultivars of rapeseed, canola, and mustard with improved quality characteristics and good disease resistance; to develop integrated methods for the control of insects and diseases in oilseed crops; and to improve management systems for rapeseed and canola production in northwestern Saskatchewan and for mustard in the Dark Brown soil zone.

This program has made several breakthroughs in rapeseed research and has led to the development of canola as a major crop for western Canada. The following improved cultivars of oilseed crops have been developed:

- rapeseed: Golden (1954), Nugget (1961), Oro (1968), Zephyr (1971), Span (1971), Midas (1973), Torch (1973), and R-500 (1976);
- canola: Candle (1977), Tobin (1981), Westar (1982), Tribute (1985);
- mustard: Sabre (1975), Blaze (1976), Domo (1977), Cutlass (1985);
- sunflower: Corona (1978).

Effects of summer-fallowing on population of wireworms, 1932.

Effets de la jachère d'été sur une population de vers-fil-de-fer, 1932.



Forage program

The objectives of the forage program are to develop improved cultivars of selected grasses and legumes for western Canada and to develop integrated methods for the control of insects in forage crops.

Low-coumarin sweetclover cultivars have been developed and work is under way to develop hardy, bloat-safe alfalfa cultivars with resistance to low-temperature diseases.

Some of the forage cultivars developed at this station are as follows: Summit crested wheatgrass (1953), Chief intermediate wheatgrass (1961), Carlton bromegrass (1961), Magna bromegrass (1968), Parkway crested wheatgrass (1969), Revenue slender wheatgrass (1970), Dormie Kentucky bluegrass (1977), Cumino sweetclover (1957), Beaver alfalfa (1961), Melrose sainfoin (1969), Polara sweetclover (1970), Yukon sweetclover (1970), Cree bird's-foot trefoil (1979), and Norgold sweetclover (1981), the first low-coumarin, yellow-flowered sweetclover in the world.

Cereals program

The objectives of the cereals program are to improve weed control and crop management systems for cereal grains production in northwestern Saskatchewan; to



develop lines of barley and hard red spring wheat with resistance to common root rot; and to develop high-yielding cultivars of medium-quality wheat. In addition, numerous regional trials are conducted to determine the performance of advanced lines in comparison with licensed cultivars. Disease surveys are also conducted to estimate crop losses and to monitor variability in disease-causing organisms.

Integrated pest management

The primary objective of this program is to reduce prairie farmers' dependence on the use of chemicals for the control of insect pests. This is being done through the development of better monitoring and predictive systems, improving efficiency of chemicals, providing better information on biology and host-parasite relationships, and on the use of biological control agents. By the integration of various control measures the amount of insecticide required for control is being reduced, and safety is being improved both for people and for the environment.

Insects under study are grasshoppers, wireworms, black flies, flea beetles, diamondback moths, bertha armyworms, sunflower moths, alfalfa plant bugs, and orange wheat blossom midges.

Dr. K.M. King, officer in charge, Dominion Entomological Laboratory, addressing visitors at a Field Day (Beaverlodge 1939).
Le Dr K.M. King, agent responsable du Laboratoire fédéral d'entomologie, donnant un exposé au cours d'une journée champêtre à Beaverlodge, en 1939.



